

7 by McHardy, Olsen, Southern and Shove underlines the problematic construction of users, often involved in design processes, or just the making of certain kinds of representatives of users. The need of involving a diverse range of users is discussed in several chapters, among others, by Simonsen and Hertzum (chapter 2), and Haldrup and Bærenholdt (chapter 13). However the main problem remains to be, as stressed by chapter 7 by McHardy, Olsen, Southern and Shove that sometimes design processes with far reaching, unforeseeable and irreversible, consequences, did not or could not involve users from the outset. This observation seems valid, whether or not consequences are predicted. The representation and even the ‘making’ of users is therefore not straightforward or democratic – but relational and a matter of struggle.

Similarly, can we always be sure about who the designers are? Designs often emerge without designers being in control. A positive example is the unanticipated up-take of SMS messaging capabilities by predominantly young mobile phone users. Initially intended as an exclusive business service emulating the success of paging technologies, the stampede of unexpected users gave rise to rapid innovation in technology and service models, enabling the use of SMS for everyday communications. A more problematic example is the discovery of the greenhouse effect of CO<sub>2</sub> emissions – embedded in the design of homes, everyday appliances and transport. Many aspects of contemporary societies come into being by such coincidence, unanticipated use or unintended consequence, unpredictably being ‘invented’ for other, not necessarily ‘efficiency oriented’, purposes. Designing technologies and organisations is thus not a simple and straight forward process. From their perspective of interpretive sociology, Olsen and Heaton (in chapter 6) stress, how much any kind of design process is a question of many actors (and we could add non-human actants) acting in ways that aggregate or synchronize in certain ways (or that do not do so, causing frictions, resistance and obstacles). If, then, human intention is involved, trust and coordination among those involved is very important, a condition *sine qua non*.

While some chapters in this book more concretely describe the experiences of processes where the authors have learned directly from their own reflective practices (including chapter 2 by Simonsen and Hertzum, chapter 10 by Ingemann, and chapter 11 by Christrup), other chapters (including chapter 3 by Nickelsen and Binder, chapter 7 by McHardy, Olsen, Southern and Shove, chapter 8 by Lindström and chapter 12 by Samson) explore processes as questions of assembly and translation, inspired by actor network theory (Latour 2005). The approach taken in these studies focuses on practices, revealing the distributed and relational nature of agency, affordances, human and non-human actors. In these and other chapters, researchers detach themselves through reflection and analysis of how designs become, are assembled and translated, rather than just defining *the* designers and specific ‘heroic’ or ‘creative’ actions, and – in the process – research through design and design through research become a ‘middle ground’ (chapter 3 by Nickelsen and Binder) between scientific research and designing practices.

Such approaches emerged in response to critiques of modern rationality and design as a means of controlling the social and the material. Participatory design approaches are

another response to these problems, exemplified in chapter 2 by Simonsen and Hertzum. They describe the process of designing an electronic patient record system and show how representatives of users, along with various designers, are involved in shaping emergent and opportunity-based change, which is not foreseeable. The process is iterative and includes real-world experiments, where designers and users observe and analyse how the design works and take responsibility for emergent outcomes, whether they are positive, wished-for and intended or negative, unanticipated and unintended.

It is a frequently recurrent question how ‘scaleable’ participatory design is, to what kinds of design objects and to what forms of socio-technical organisation such an approach can be taken. Samson, for example, in chapter 12, explores the use of participatory processes for urban planning and in chapter 7, McHardy, Olsen, Southern and Shove imply that design research can support negotiation, necessary struggle and reconciliation between different interests and positions, enabling groups of people to cope more creatively and more circumspectly with the myriad forces involved in heterogeneous processes. This normative assumption that design research should facilitate collaborative management of change is common to all chapters, as is the acknowledgement of open-endedness of the processes involved, and the concluding chapter 14 readdresses the synergies required for this.

## **THE MATERIAL AND THE SOCIAL IN DESIGN PROCESSES**

Several chapters discuss the role of materials or materiality, for example, the eco-friendly affordances of flax (chapter 9 by Holm, Søndergård and Hansen), the quality of historical urban-industrial neighbourhoods (chapter 12 by Samson), and the engaging character of archaeological craftsmanship (chapter 13 by Haldrup and Bærenholdt). The latter highlight that while ‘design’ was not a part of the conceptual toolbox, for example, in tourism studies until recently, use of the term ‘design’ is increasing in areas that more commonly used words like ‘produce’, ‘make’, ‘construct’, ‘build’, ‘fabricate’ or ‘plan’. Latour remarks that design has emerged in numerous professions, and ‘it now extends from details of daily objects to cities, to landscapes, to nations, to cultures, to bodies, to genes, and ... to nature itself in great need of being redesigned’ (Latour 2008: 2). He claims that the use of ‘design’ implies going into a practical engagement with the material ‘envelops’ – things, artefacts and environments – that humans dwell in. Going beyond professional design, interest in the role of things and design in everyday life is growing (Coastal and Dreier 2006, Miller 2010, Shove et al. 2007).

But material aspects matter not only when it comes to the shape and feel of products, technologies, urban spaces. They are also critical in design work. Much design research, including this book, talks about the important role of artefacts and materials. In chapter 2, Simonsen and Hertzum show how the materiality of design can foster change, for example: their technology enables material changes in the organisation of communication between health professionals, allowing them to move from oral reporting to a shared view of issues at hand. In more theoretical terms, Binder and Nickelsen, in chapter 3 and Lindström in chapter 8 explain how the concept of translation in Latour’s work can help design research to understand the continuous

making and shaping of socio-material networks. Binder and Nickelsen investigate the materiality of rubber and of different types of moulding machines to reveal the nature of design as middle ground, while Lindström's case study is about the use of expert economics for policy. This way of thinking also comes through in chapter 12 by Samson, who translates Latour's ideas about 'drawing things together' into architecture and urban planning. Haldrup and Bærenholdt in chapter 13, in addition, suggest the Gibsonian concept of affordance in order to understand the role of museum artefacts such a replica Viking ships in relation to tourist experiences. Material design involves the making of affording artefacts, offering certain possibilities of experience to people, thus further developing classic approaches to design as suggested by Norman (1988).

Daniel Miller (2010: 50), writing on material culture, has an appealing way of describing the humility of objects, powerful because we do not reflect on their capacities for defining sites. Much of the discrete power of models, blueprints and masterplans, for example is exactly because of their non-apparent organisation of interaction - first as an 'immutable mobile' (Latour 2005), organising interactions between interdisciplinary teams of designers, clients, users and contractors, then as the structure for interaction in a place or with an object.

The coming together of the social and the material in design processes is discussed in most chapters in this book. Importantly, attention to the entangled relation between the material and the social reveals how research is done through design and design through research. Design research practice integrates social and material relations in ways where we can no longer make exact judgements of what is inside and outside of designing, where epistemic practices are shown to affect the shape of things, just as much, albeit in different ways, as material endeavours to design and control change. Uncertainty, unpredictability, irrepressible emergence and the lived everyday creativity of collectives makes the world fluid. This fluidity must be matched by sensitive, responsive and 'fluid' practices of researching and designing. It requires processes of researching and designing that enable people to participate responsibly and creatively in the making of researchers, makeshift users, and designers as well as the making of wished-for change.

## REFERENCES

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